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EXAMINER

GREENE, JASON M

ART UNIT	PAPER NUMBER
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1724

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DATE MAILED: 02/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,731

Applicant(s)

MURPHY ET AL.

Examiner

Jason M. Greene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4,5,6 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Lines 2-5 of claim 27 recite "wherein said hose fitting comprises an inlet conduit projecting outwardly away from cover and an inlet conduit projecting into said dirt separation chamber adjacent said open first end of said dirt cup, said inlet conduit directed obliquely toward said interior wall of said dirt cup defining said dirt separation chamber". The specification does not

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provide support for the inlet conduit projecting into said dirt separation chamber adjacent said open first end of said dirt cup or said inlet conduit being directed obliquely toward said interior wall of said dirt cup defining said dirt separation chamber. It appears as though the phrase "inlet conduit" in lines 3 and 4 should be changed to read as "outlet conduit".

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4, 14, 18, 22, 24, and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "said hose" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the canister vacuum cleaner" in line 1. There is insufficient antecedent basis for this limitation in the claim. The Examiner suggests changing the limitation to read as "the bagless vacuum cleaner".

Claim 18 recites the limitations "said plurality of wheels connected to said main housing" and "said associated support surface" in lines 4 and 5 and line 6, respectively. There is insufficient antecedent basis for these limitations in the claim.

Claim 22 recites the limitation "said end wall" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 24 recites the limitation "said associated support surface" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 35 recites the limitation "said support surface" in line 19. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Yung '350.

With regard to claim 1, Yung '350 discloses a canister vacuum cleaner (10) comprising a body (20) defining a suction inlet (not numbered) and an exhaust outlet (not numbered), a suction source (14) contained in said body and located fluidically between said suction inlet and said exhaust outlet, a dirt cup (32) releasably connected to said body, said dirt cup defining a dirt separation chamber and an airstream outlet (84) that releasably mates with said suction inlet when said dirt cup is connected to said body, said dirt separation chamber conformed to impart a rotational flow pattern to an airstream passing therethrough whereby contaminants entrained in said airstream are separated therefrom and deposited in said dirt cup, and a filter (76) located in said dirt separation chamber of said dirt cup in covering relation with said airstream outlet in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

With regard to claim 7, Yung '350 discloses the filter (76) being releasably connected to the dirt cup (32) in Figs. 1-7 and col. 4, lines 27-62.

8. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Miyake et al.

Miyake et al. discloses a bagless vacuum cleaner comprising a body (120), a dirt cup (123) releasably connected to and selectively separable from said body, and a plurality of wheels (186) each connected to one of said body and said dirt cup for

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movably supporting said body and said dirt cup on an associated support surface when said dirt cup is connected to said body, said plurality of wheels comprising at least one wheel connected to said dirt cup (123) in Fig. 3 and col. 6, lines 10-62.

9. Claims 35 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Yung '350.

With regard to claim 35, Yung '350 discloses a bagless vacuum cleaner (10) comprising a main housing (20) defining a suction source inlet (not numbered), an exhaust outlet (not numbered), and a receiver region (not numbered) adapted to receive a dirt cup (32), a suction source (14) located fluidically between said suction source inlet and said exhaust outlet, a dirt cup (32) releasably coupled to said receiver region of said main housing, said dirt cup comprising, an interior wall (38) defining a dirt separation chamber, an open first end in communication with said dirt separation chamber, and an airstream outlet (84) from said dirt separation chamber, said dirt cup releasably coupled to said main housing with said airstream outlet of said dirt cup mated with said suction source inlet of said main housing, a filter assembly (76) releasably connected to said dirt cup and located in said dirt separation chamber, said filter assembly comprising a filter element located in covering relation with said airstream outlet of said dirt cup and positioned so that an annular airflow space is defined between said filter element and said interior wall of said dirt cup, and a base (lower right-most portion of 12, as viewed in Fig. 2 and 22) connected to said main

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housing and conformed to support said main housing and said dirt cup releasably connected to said receiver region of said main housing on said support surface in a second, non-operative position with said open first end of said dirt cup located at a select elevation relative to said dirt separation chamber to prevent spillage of associated dirt and debris contents of said dirt separation chamber from said open first end of said dirt cup in Figs. 1-7 and col. 3, line 3 to col. 5, line 59. The base is seen as being the lower right-most portion of the chassis 12 and the air inlet 22. As can be seen in Fig. 2, the vacuum cleaner is capable of being stored by rotating the vacuum cleaner clockwise until the air inlet 22 comes to rest on the associated support surface. Since the air inlet 22 and the portion of the chassis 12 in contact with the associated support surface will support all of the weight of the vacuum cleaner, the air inlet 22 and the portion of the chassis 12 in contact with the associated support surface is seen as forming a base.

With regard to claim 36, Yung et al. discloses the vacuum cleaner comprising a plurality of wheels (26) for supporting the main housing above the associated support surface, wherein the base is conformed to support said main housing and said dirt cup releasably to said main housing in the second, non-operative position with at least one of the plurality of wheels out of contact with the said associated support surface in Figs. 1-7 and col. 3, line 3 to col. 5, line 59. As can be seen from Fig. 2, if the vacuum cleaner is rotated clockwise (as viewed in Fig. 2) to support the vacuum cleaner on the base, both of the wheels (26) will be out of contact with the associated support surface.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 in view of Meijer et al.

Yung '350 discloses a first portion (84) of the dirt cup defining said airstream outlet and a second portion (46) of the dirt cup defining an open entrance to the dirt separation chamber, wherein the canister vacuum cleaner includes a hose (22) communicating with said dirt separation chamber of said dirt cup through a hose fitting (92), wherein an outlet of said hose fitting is directed obliquely toward an interior wall (38) of said dirt cup, whereby an airstream entering said dirt separation chamber from said outlet of said hose fitting is directed obliquely at said interior wall of said dirt cup in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 does not disclose the body comprising a cover that is selectively located in covering relation with said open entrance of said dirt cup when said dirt cup is connected to said body, wherein said cover is pivotably connected to a main portion of said body and pivots on an arc between a first position spaced away from said open

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entrance of said dirt cup and a second position in covering relation with said open entrance of said dirt cup, wherein a hose communicates with said dirt separation chamber of said dirt cup through said movable cover, the canister vacuum cleaner further comprising a hose fitting connected to and extending through said cover, said hose fitting comprising an inlet conduit projecting outwardly away from said cover external to said body and an outlet conduit located adjacent said open entrance of said dirt cup when said dirt cup is connected to said housing and said cover is placed in covering relation with said open entrance of said dirt cup, wherein said outlet conduit of said hose fitting is directed obliquely toward an interior wall of said dirt cup when said cover is placed in covering relation with said open entrance of said dirt cup whereby an airstream entering said dirt separation chamber from said outlet conduit of said hose fitting is directed obliquely at said interior wall of said dirt cup.

Meijer et al. discloses a similar canister vacuum cleaner including a body (1) comprising a cover (41) that is selectively located in covering relation with an open entrance of a dirt cup (11) when said dirt cup is connected to said body, wherein said cover is pivotably connected to a main portion of said body and pivots on an arc between a first position spaced away from said open entrance of said dirt cup and a second position in covering relation with said open entrance of said dirt cup, wherein a hose (45) communicates with said dirt separation chamber of said dirt cup through said movable cover, the canister vacuum cleaner further comprising a hose fitting (43) connected to and extending through said cover, said hose fitting comprising an inlet conduit projecting outwardly away from said cover external to said body and an outlet

conduit located adjacent said open entrance of said dirt cup when said dirt cup is connected to said housing and said cover is placed in covering relation with said open entrance of said dirt cup, wherein said outlet conduit of said hose fitting is directed toward an interior said dirt cup when said cover is placed in covering relation with said open entrance of said dirt cup in Figs. 1-3 and col. 3, line 56 to col. 8, line 20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the moveable cover of Meijer et al. into the canister vacuum cleaner of Yung '350 to allow the upper portion of the body and the hose fitting to be pivotably displaced away from the dirt cup to facilitate removal of the dirt cup and to provide additional access to the interior of the body when the vacuum cleaner requires servicing.

12. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 in view of Miyake et al.

With regard to claim 8, Yung '350 discloses an annular airflow space being defined between the filter (76) and an interior wall (38) of said dirt cup (32) that defines said dirt separation chamber, wherein said canister vacuum cleaner further comprises a plurality of wheels (26) connected to said body and adapted to support said body movably on an associated support surface in an operative position in Figs 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 does not disclose the filter being inclined relative to said associated support surface less than 20 degrees.

Miyake et al. discloses a similar canister vacuum cleaner (120) having a filter (130) which is parallel to an associated support surface in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the horizontal orientation of Miyake et al. into the dirt cup and filter assembly of Yung '350 to allow the dirt cup and filter assembly to be located closer to the associated support surface to lower the center of gravity of the canister vacuum cleaner to reduce the propensity of the canister vacuum cleaner to tip over.

With regard to claim 9, Yung '350 does not disclose at least one of the plurality of wheels being connected to said dirt cup, said plurality of wheels movably supporting said body and dirt cup connected to said body on an associated support surface.

Miyake et al. discloses a similar canister vacuum cleaner (120) having one of a plurality of wheels (186) connected to a dirt cup (123) in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wheel connected to the dirt cup of Miyake into the canister vacuum cleaner of Yung '350 to provide direct support means for the dirt cup to allow the vacuum cleaner to be manufactured without the portion of the body supporting the dirt cup to reduce manufacturing costs, as suggested by Miyake et al. in Fig. 3.

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With regard to claim 10, Yung '350 does not disclose the filter extending axially in said dirt cup along a longitudinal axis that is parallel to the associated support surface when said body and said dirt cup are moveably supported on the associated support surface.

Miyake et al. discloses a similar canister vacuum cleaner (120) having a filter (130) extending axially in along a longitudinal axis that is parallel to an associated support surface when said body is moveably supported on the associated support surface in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the horizontal orientation of Miyake et al. into the dirt cup and filter assembly of Yung '350 to allow the dirt cup and filter assembly to be located closer to the associated support surface to lower the center of gravity of the canister vacuum cleaner to reduce the propensity of the canister vacuum cleaner to tip over.

With regard to claim 11, Yung '350 discloses the dirt cup including an end wall (82) that defines said airstream outlet (84), said filter (76) projecting outwardly from said end wall and unsupported by said dirt cup between said end wall and an outer end of said filter that is spaced from said end wall in Figs 1-7 and col. 3, line 3 to col. 5, line 59.

With regard to claim 12, Yung '350 discloses the vacuum cleaner further comprising an exhaust filter (94) located in said body in covering relation with said exhaust outlet in Fig. 2 and col. 5, lines 21-23.

13. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 in view of Miyake et al.

Yung '350 et al. discloses a bagless vacuum cleaner comprising a body (20), a dirt cup (32) releasably connected to and selectively separable from said body, and a plurality of wheels (26) each connected to one of said body and said dirt cup for movably supporting said body and said dirt cup on an associated support surface when said dirt cup is connected to said body, wherein said dirt cup comprises a handle (not numbered) in Figs 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 does not disclose at least one of the plurality of wheels being connected to the handle of the dirt cup.

Miyake et al. discloses a similar canister vacuum cleaner (120) having one of a plurality of wheels (186) connected to a dirt cup (123) in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wheel connected to the dirt cup of Miyake into the canister vacuum cleaner of Yung '350 to provide direct support means for the dirt cup to allow the vacuum cleaner to be manufactured without the portion of the body supporting the dirt cup to reduce manufacturing costs, as suggested by Miyake et al. in Fig. 3.

Yung '350 and Miyake et al. do not disclose the at least one wheel connected to the dirt cup being connected to the handle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to shift the location of the wheel from the base of the dirt cup to the handle of the dirt cup in the shifting the location of parts without otherwise modifying the operation of the device is merely a choice of design. See *In re Japikse*, 86 USPQ 70.

14. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 and Miyake et al. as applied to claim 14 above, and further in view of Lee et al.

Yung '350 and Miyake et al. do not disclose the at least one wheel connected to the dirt cup comprising a pivotable caster wheel assembly.

Lee et al. discloses a vacuum cleaner wherein one of the wheels comprises a pivotable caster wheel assembly in Figs. 1 and 2 and col. 2, lines 47-53.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pivotable caster wheel assembly of Lee et al. into the bagless vacuum cleaner of Yung '350 and Miyake et al. to facilitate moving the vacuum cleaner in different directions, as suggested by Lee et al. in Figs. 1 and 2.

15. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 and Miyake et al. as applied to claim 14 above, and further in view of Reichow et al.

Yung '350 and Miyake et al. do not disclose the dirt cup defining a pouring spout.

Reichow et al. discloses a vacuum cleaner having a dirt cup (22) defining a pouring spout (154) in Fig. 3 and col. 5, line 38 to col. 6, line 6.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pouring spout of Reichow et al. into the dirt cup of Yung '350 and Miyake et al. to facilitate the removal of the collected dirt from the dirt cup.

16. Claims 17, 19-23, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 in view of Meijer et al.

With regard to claims 17, 19, 20, and 27, Yung '350 discloses a bagless canister vacuum cleaner (10) comprising a main housing (20) defining a suction source inlet (not numbered), an exhaust outlet (not numbered), and a receiver region (not numbered) adapted to receive a dirt cup (32), a suction source (14) located fluidically between said suction source inlet and said exhaust outlet, a dirt cup (32) releasably coupled to said receiver region of said main housing, said dirt cup comprising an interior wall (38) defining a dirt separation chamber, an open first end in communication with said dirt separation chamber, and a closed second end with an aperture forming an airstream outlet (84) from said dirt separation chamber, said dirt cup releasably coupled to said main housing with said airstream outlet of said dirt cup mated with said suction source inlet of said main housing, a filter assembly (76) releasably connected

to said dirt cup and located in said dirt separation chamber, said filter assembly comprising a filter element located in covering relation with said airstream outlet of said dirt cup and positioned so that an annular airflow space is defined between said filter element and said interior wall of said dirt cup, wherein said vacuum cleaner comprises a hose fitting (92) adapted for connection to an associated hose (22), said hose fitting comprising an outlet conduit projecting into said dirt separation chamber adjacent said open first end of said dirt cup, said outlet conduit directed obliquely toward said interior wall (38) of said dirt cup defining said dirt separation chamber in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 does not disclose the vacuum cleaner comprising a cover pivotably connected to said housing, said cover movable between an open position, where said cover is disengaged from said dirt cup, and a closed, operative position where said cover is placed in covering relation with and blocks said open first end of said dirt cup, said cover, when located in said closed, operative position, preventing separation of said dirt cup from said main housing, a hose fitting adapted for connection to an associated hose, said hose fitting connected to said cover and movable therewith and arranged in fluid communication with said dirt separation chamber when said cover is located in said closed, operative position; a manually operable latch comprising a first portion and a second portion adapted to releasably mate with said first portion, wherein one of said first and second portions is connected to said cover and the other of said first and second portions is connected to one of said dirt cup and said main housing,

said latch selectively retaining said cover in said closed, operative position, wherein said first portion of said latch is connected to said cover and said second portion of said latch is connected to said dirt cup, said cover, when retained in said closed operative position relative to said dirt cup by said latch, preventing separation of said dirt cup from said housing, wherein said hose fitting comprises an inlet conduit projecting outwardly away from said cover and an inlet conduit projecting into said dirt separation chamber adjacent said open first end of said dirt cup, said inlet conduit directed obliquely toward said interior wall of said dirt cup defining said dirt separation chamber.

Meijer et al. discloses a vacuum cleaner comprising a cover (41) pivotably connected to a housing (1), said cover movable between an open position, where said cover is disengaged from a dirt cup (11), and a closed, operative position where said cover is placed in covering relation with and blocks an open first end of said dirt cup, said cover, when located in said closed, operative position, preventing separation of said dirt cup from said main housing, a hose fitting (43) adapted for connection to an associated hose (45), said hose fitting connected to said cover and movable therewith and arranged in fluid communication with said dirt separation chamber when said cover is located in said closed, operative position, a manually operable latch (79,87) comprising a first portion (79) and a second portion (87) adapted to releasably mate with said first portion, wherein one of said first and second portions is connected to said cover and the other of said first and second portions is connected to one of said dirt cup and said main housing, said latch selectively retaining said cover in said

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closed, operative position, wherein said first portion of said latch is connected to said cover and said second portion of said latch is connected to said dirt cup, said cover, when retained in said closed operative position relative to said dirt cup by said latch, preventing separation of said dirt cup from said housing, wherein said hose fitting comprises an inlet conduit projecting outwardly away from said cover and an outlet conduit projecting into said dirt separation chamber adjacent said open first end of said dirt cup, said outlet conduit directed toward said interior of said dirt cup defining said dirt separation chamber in Figs. 1-3 and col. 3, line 56 to col. 8, line 20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the moveable cover of Meijer et al. into the canister vacuum cleaner of Yung '350 to allow the upper portion of the body and the hose fitting to be pivotably displaced away from the dirt cup to facilitate removal of the dirt cup and to provide additional access to the interior of the body when the vacuum cleaner requires servicing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the latch of Meijer et al. into the canister vacuum cleaner of Yung '350 to provide means for reliably securing the cover to the dirt cup.

With regard to claim 21, Yung '350 does not disclose the dirt cup defining a projecting male portion that mates with a female portion of said main housing when said dirt cup is coupled to said receiver region of said main housing, and wherein said

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male and female portions are inseparable when said cover is located in its closed, operative position.

Meijer et al. discloses a similar vacuum cleaner wherein a dirt cup (11) defines a projecting male portion (73) that mates with a female portion (75) of a main housing (1) when said dirt cup is coupled to said receiver region of said main housing, and wherein said male and female portions are inseparable when a cover is located in its closed, operative position in Fig. 2A and col. 6, lines 38-43.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the male and female portions of Meijer into the canister vacuum cleaner of Yung '350 to provide means for reliably securing the dirt cup to the housing.

With regard to claims 22 and 23, Yung '350 discloses the filter assembly (76) being releasably connected to and projecting outwardly from an end wall (82) of the dirt cup, wherein said end wall (82) defines a boss (not numbered, adjacent to 98) surrounding said airstream outlet (84) and wherein said filter assembly includes a base plate (not numbered, end cap of filter 76) that is releasably engaged with said boss by a friction fit in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

With regard to claims 25 and 26, Yung '350 discloses a final filter (94) being located downstream from the suction source (14) and upstream from the exhaust outlet to filter an exhaust airstream exhausted by said suction source prior to said exhaust

airstream being exhausted from said exhaust outlet of said main housing in Fig. 2 and col. 5, lines 21-23.

17. Claims 18, 24, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 and Meijer et al. as applied to claim 17 above, and further in view of Miyake et al.

With regard to claims 18 and 28, Yung '350 discloses the vacuum cleaner comprising a plurality of wheels (26) connected to the main housing to movably support the main housing and said dirt cup (32) on an associated support surface when said dirt cup is coupled to said receiver region of said main housing, wherein said dirt cup includes a handle assembly (not numbered) in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 and Meijer et al. do not disclose at least one of the wheel assemblies being supported by the handle of the dirt cup external to the dirt separation chamber, wherein the wheel assembly comprises a rotatable wheel.

Miyake et al. discloses a similar canister vacuum cleaner (120) having one of a plurality of wheel assemblies (186) supported by a dirt cup (123), wherein the wheel assembly comprises a rotatable wheel in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wheel supported by the dirt cup of Miyake into the canister vacuum cleaner of Yung '350 and Meijer et al. to provide direct support

means for the dirt cup to allow the vacuum cleaner to be manufactured without the portion of the body supporting the dirt cup to reduce manufacturing costs, as suggested by Miyake et al. in Fig. 3.

Yung '350, Meijer et al., and Miyake et al. do not disclose the at least one wheel connected to the dirt cup being connected to the handle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to shift the location of the wheel from the base of the dirt cup to the handle of the dirt cup in the shifting the location of parts without otherwise modifying the operation of the device is merely a choice of design. See *In re Japikse*, 86 USPQ 70.

With regard to claim 24, Yung '350 and Meijer et al. do not disclose the filter assembly being defined about a longitudinal axis that lies parallel to the associated support surface when said main housing is movably and operatively supported on said associated support surface by said plurality of wheels.

Miyake et al. discloses a similar canister vacuum cleaner (120) having a filter assembly (130) being defined about a longitudinal axis that lies parallel to an associated support surface when said main housing is moveably and operably supported on the associated support surface by said plurality of wheels in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the horizontal orientation of Miyake et al. into the dirt cup and filter assembly of Yung '350 to allow the dirt cup and filter assembly to be

located closer to the associated support surface to lower the center of gravity of the canister vacuum cleaner to reduce the propensity of the canister vacuum cleaner to tip over.

18. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350, Meijer et al., and Miyake et al. as applied to claim 28 above, and further in view of Lee et al.

Yung '350, Meijer et al., and Miyake et al. do not disclose the at least one wheel connected to the dirt cup comprising a pivotable caster wheel assembly including said rotatable wheel.

Lee et al. discloses a vacuum cleaner wherein one of the wheels comprises a pivotable caster wheel assembly including a rotatable wheel in Figs. 1 and 2 and col. 2, lines 47-53.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pivotable caster wheel assembly of Lee et al. into the bagless vacuum cleaner of Yung '350, Meijer et al., and Miyake et al. to facilitate moving the vacuum cleaner in different directions, as suggested by Lee et al. in Figs. 1 and 2.

19. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 in view of Meijer et al.

Yung '350 discloses a bagless canister vacuum cleaner (10) comprising a main housing (20) defining an airflow inlet (not numbered), an airflow outlet (not numbered), and a receiver region (not numbered) adapted to receive a dirt cup (32), a suction source (14) located in said housing and operational to establish and maintain an airstream that flows from said airflow inlet to said airflow outlet, a dirt cup (32) releasably coupled to said receiver region of said main housing, said dirt cup comprising, an interior wall (38) defining a dirt separation chamber conformed to impart a rotational flow path to a dirty airstream passing therethrough whereby contaminants are separated from the dirty airstream and deposited in said dirt cup, an open first end in communication with said dirt separation chamber, and an airstream outlet (84) from said dirt separation chamber, said dirt cup releasably coupled to said main housing with said airstream outlet of said dirt cup mated with said airflow inlet of said main housing, a filter assembly (76) releasably connected to said dirt cup and located in said dirt separation chamber, said filter assembly comprising a filter element located in covering relation with said airstream outlet of said dirt cup, and a hose (22) and a hose fitting (92) interconnected to said hose, said hose fitting comprising a first portion projecting outwardly away from the dirt cup and a second portion projecting into said dirt separation chamber adjacent said open first end of said dirt cup, said second portion directed obliquely toward said interior wall of said dirt cup defining said dirt separation chamber in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 does not disclose the vacuum cleaner comprising a cover connected to said housing, said cover movable between an open position, where said cover is

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disengaged from said dirt cup, and a closed, operative position where said cover is placed in covering relation with and blocks said open first end of said dirt cup, said cover, when located in said closed, operative position, preventing separation of said dirt cup from said main housing, or the hose fitting interconnecting the hose to the cover, said first portion of said hose fitting projecting outwardly away from said cover.

Meijer discloses a vacuum cleaner comprising a cover (41) connected to a housing (1), said cover movable between an open position, where said cover is disengaged from said dirt cup, and a closed, operative position where said cover is placed in covering relation with and blocks said open first end of said dirt cup, said cover, when located in said closed, operative position, preventing separation of a dirt cup (11) from said main housing, and a hose fitting (43) interconnecting a hose (45) to the cover, a first portion of said hose fitting projecting outwardly away from said cover and a second portion projecting into said dirt cup, wherein said cover includes a handle (79) to facilitate manual movement of the cover between the open and closed positions in Figs. 1-3 and col. 3, line 56 to col. 8, line 20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the moveable cover of Meijer et al. into the canister vacuum cleaner of Yung '350 to allow the upper portion of the body and the hose fitting to be pivotably displaced away from the dirt cup to facilitate removal of the dirt cup and to provide additional access to the interior of the body when the vacuum cleaner requires servicing.

20. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 and Meijer et al. as applied to claim 30 above, and further in view of Miyake et al.

Yung '350 discloses the vacuum cleaner comprising a plurality of wheels (26) for movably supporting said main housing (20) and said dirt cup (32) on a support surface when said dirt cup is coupled to said receiver region of said main housing, wherein said dirt cup comprises a handle in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 and Meijer et al. do not disclose at least one of said plurality of wheels connected to the handle of said dirt cup.

Miyake et al. discloses a similar canister vacuum cleaner (120) having one of a plurality of wheel assemblies (186) connected to a dirt cup (123) in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wheel connected to the dirt cup of Miyake into the canister vacuum cleaner of Yung '350 and Meijer et al. to provide direct support means for the dirt cup to allow the vacuum cleaner to be manufactured without the portion of the body supporting the dirt cup to reduce manufacturing costs, as suggested by Miyake et al. in Fig. 3.

Yung '350, Meijer et al., and Miyake et al. do not disclose the at least one wheel connected to the dirt cup being connected to the handle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to shift the location of the wheel from the base of the dirt cup to

the handle of the dirt cup in the shifting the location of parts without otherwise modifying the operation of the device is merely a choice of design. See *In re Japikse*, 86 USPQ 70.

21. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 in view of Reichow et al. and Watson.

Yung '350 discloses the dirt cup comprising a handle (not numbered) in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 does not disclose the open first end of the dirt cup defining a spout that is conformed to facilitate pouring associated dirt and debris contents from said dirt separation chamber of said dirt cup, and wherein said handle on said dirt cup is located opposite said spout.

Reichow et al. discloses a vacuum cleaner having a dirt cup (22) defining a pouring spout (154) in Fig. 3 and col. 5, line 38 to col. 6, line 6.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pouring spout of Reichow et al. into the dirt cup of Yung '350 to facilitate the removal of the collected dirt from the dirt cup.

Watson teaches locating a pouring spout opposite a handle in Fig. 1 and col. 6, lines 10-12.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the opposite spout and handle arrangement of

Watson into the dirt cup of Yung '350 and Reichow et al. to provide for easier handling of the dirt cup while emptying the contents.

22. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 in view of Miyake et al.

Yung '350 discloses a vacuum cleaner (10) comprising a housing (20), a dirt cup (32) releasably connected to said housing, said dirt cup defining a dirt separation chamber, a filter (76) located in said dirt separation chamber of said dirt cup, and a suction source (14) located in said housing and in fluid communication with said dirt separation chamber, said suction source, when selectively operated, establishing and maintaining a suction airstream that flows into and through said dirt separation chamber to an exhaust outlet defined by said housing, wherein said suction airstream, when moving through said dirt separation chamber, moves rotationally around an axis of said filter before passing through said filter and exiting said dirt separation chamber in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 does not disclose the filter having a substantially horizontal axis.

Miyake et al. discloses a similar canister vacuum cleaner (120) having a filter (130) having a substantially horizontal axis in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the horizontal orientation of Miyake et al. into the dirt cup and filter assembly of Yung '350 to allow the dirt cup and filter assembly to be located closer to the associated support surface to lower the center of gravity of the

canister vacuum cleaner to reduce the propensity of the canister vacuum cleaner to tip over.

23. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 in view of Reichow et al.

Yung '350 discloses a bagless vacuum cleaner (10) comprising a body (20), and a dirt cup (32) releasably connected to and selectively separable from said body, said dirt cup comprising a handle (not numbered) in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 does not disclose the dirt cup a having a pour spout.

Reichow et al. discloses a vacuum cleaner having a dirt cup (22) having a pour spout (154) in Fig. 3 and col. 5, line 38 to col. 6, line 6.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pour spout of Reichow et al. into the dirt cup of Yung '350 to facilitate the removal of the collected dirt from the dirt cup.

24. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 and Reichow et al. as applied to claim 39 above, and further in view of Watson.

Yung '350 and Reichow et al. do not disclose the handle and pour spout being located opposite each other.

Watson teaches locating a pouring spout opposite a handle in Fig. 1 and col. 6, lines 10-12.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the opposite spout and handle arrangement of Watson into the dirt cup of Yung '350 and Reichow et al. to provide for easier handling of the dirt cup while emptying the contents.

25. Claims 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 and Reichow et al. as applied to claim 39 above, and further in view of Shirayanagi et al.

Yung '350 and Reichow et al. do not disclose the vacuum cleaner comprising a second handle, wherein the second handle is connected to the body or a strap connected to said body, said strap adapted for securing said bagless vacuum cleaner to a body of a user.

Shirayanagi et al. discloses a vacuum cleaner (2) having a handle (not numbered) connected to the body and a strap (84) connected to the body, said strap adapted for securing said bagless vacuum cleaner to a body of a user in Fig. 12.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the handle and strap of Shirayanagi et al. into the vacuum cleaner of Yung '350 and Reichow et al. to allow the person using the vacuum cleaner to easily transport it.

26. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 and Reichow et al. as applied to claim 39 above, and further in view of Meijer et al.

Yung '350 and Reichow et al. do not disclose the vacuum cleaner comprising a lid connected to said body and adapted for selectively covering an open end of said dirt cup, and a handle connected to the lid.

Meijer et al. discloses a vacuum cleaner comprising a lid (41) connected to said body and adapted for selectively covering an open end of a dirt cup (11), and a handle (79) connected to the lid in Figs. 1-3 and col. 3, line 56 to col. 8, line 20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the moveable cover of Meijer et al. into the canister vacuum cleaner of Yung '350 and Reichow et al. to allow the upper portion of the body and the hose fitting to be pivotably displaced away from the dirt cup to facilitate removal of the dirt cup and to provide additional access to the interior of the body when the vacuum cleaner requires servicing.

27. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yung '350 and Reichow et al. as applied to claim 39 above, and further in view of Miyake et al.

Yung '350 discloses the vacuum cleaner comprising a plurality of wheels (26) connected to the body in Figs. 1-7 and col. 3, line 3 to col. 5, line 59.

Yung '350 and Reichow et al. do not disclose at least one wheel being connected to the dirt cup.

Miyake et al. discloses a similar canister vacuum cleaner (120) having one of a plurality of wheels (186) connected to a dirt cup (123) in Fig. 3 and col. 6, lines 10-62.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wheel connected to the dirt cup of Miyake into the canister vacuum cleaner of Yung '350 and Reichow et al. to provide direct support means for the dirt cup to allow the vacuum cleaner to be manufactured without the portion of the body supporting the dirt cup to reduce manufacturing costs, as suggested by Miyake et al. in Fig. 3.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Yung '518, Sawada et al., Song et al., Oh et al., Tuvín et al., and Bartlett references disclose similar vacuum cleaners.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (703) 308-6240. The examiner can normally be reached on Tuesday - Friday (7:00 AM to 5:30 PM).

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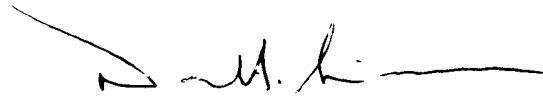
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Simmons can be reached on (703) 308-1972. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jason M. Greene
Examiner
Art Unit 1724



jmg
January 17, 2003



David A. Simmons
Supervisory Patent Examiner
Technology Center 1700